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Takeshi Kobayashi

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23405

7590

11/28/2008

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EXAMINER

SINCLAIR, DAVID M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,460	Applicant(s) KOBAYASHI ET AL.	
	Examiner DAVID M. SINCLAIR	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 10-13, 16-17, & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-161563 hereafter referred to as JP563 in view of Takase (2002/0090876) and JP7-279024 hereafter referred to as JP024.

In regards to claim 10,

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JP563 discloses a separator for an electric double layer capacitor, wherein a layer of an ultrafine fibrous aggregate prepared by an electrostatic spinning process is contained, an average fiber diameter of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 1 μm or less (abstract; page 2 – right column - lines 5-16 and left column – line 5; page 14 right column line 12).

JP563 fails to teach the separator for an electric double layer capacitor, the thickness of the entire separator is 25 μm or less, and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm^3 .

Takase '876 teaches a separator wherein the thickness of the entire separator is 25 μm or less ([0057]) and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size ([0071]). Takase '876 fails to teach the separator for an electric double layer capacitor and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm^3 .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thickness and ratio taught by Takase '876 with the separator of JP563 to obtain a separator that is small in size and has a narrow distribution of pore size which allows the electrolyte to be uniformly dispersed thus reducing the internal resistance.

JP024 discloses a separator comprising an apparent density of 0.1 to less than 0.27 g/cm³ ([0016]). JP024 fails to teach the separator for an electric double layer capacitor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparent density taught by JP024 as the apparent density of the separator of JP563 to obtain a strong separator that has good ion permeability and electrolyte holding.

The limitation “for an electric double layer capacitor” is an intended use of the separator, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987)

In regards to claim 11,

The references as applied above disclose all the limitations of claim 11 except a thickness of the entire separator is 20 μm or less.

Takase '876 teaches a thickness of the entire separator is 20 μm or less ([0057]).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thickness taught by Takase '876 with the separator of JP563 to obtain a separator that is small in size allowing miniaturization of the device it is used in.

In regards to claim 12,

The references as applied above disclose all the limitations of claim 12 except the mean flow pore size of said ultrafine fibrous aggregate layer is 1 μm or less.

Takase '876 teaches mean flow pore size of said ultrafine fibrous aggregate layer is 1 μm or less ([0091] – maximum pore size is 40 μm or less therefore mean flow pore size is 20 μm or less).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mean flow pore size taught by Takase '876 with the separator of JP563 to obtain a separator that allows uniform dispersion of an electrolyte.

In regards to claim 13,

The references as applied above disclose all the limitations of claim 13 except a ratio (D_d/D_a) of a standard deviation (D_d) of fiber diameters of ultrafine fibers constituting said ultrafine fibrous aggregate layer to an average fiber diameter

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(Da) of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 0.25 or less.

Takase '876 teaches a ratio (Dd/Da) of a standard deviation (Dd) of fiber diameters of ultrafine fibers constituting said ultrafine fibrous aggregate layer to an average fiber diameter (Da) of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 0.25 or less ([0025]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ratio taught by Takase '876 with the separator of JP563 to obtain a separator with uniform pore diameter and internal space allowing the electrolyte to be uniformly distributed.

In regards to claim 16,

The references as applied above disclose all the limitations of claim 16 except a porosity of said separator is 50% to 95%.

Takase '867 teaches a porosity of said separator is 50% to 95% ([0072]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the porosity taught by Takase '876 with the separator of JP563 to obtain a separator with lowered internal resistance and pressure.

In regards to claim 17,

The references as applied above disclose all the limitations of claim 17 except a tensile strength per 1 g/m² in mass per unit area is 0.15 N/5 mm width or more in at least one direction of said separator

Takase '867 teaches a tensile strength per 1 g/m² in mass per unit area is 0.15 N/5 mm width or more in at least one direction of said separator ([0075]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tensile strength taught by Takase '876 with the separator of JP563 to obtain a separator that is less susceptible to breakage.

In regards to claim 19,

The references as applied above disclose all the limitations of claim 17 except said apparent density is 0.1 to 0.23 g/cm³.

JP024 discloses said apparent density is 0.1 to 0.23 g/cm³ ([0016]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparent density taught by JP024 as the apparent

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density of the separator of JP563 to obtain a strong separator that has good ion permeability and electrolyte holding.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP563, Takase '876, and JP024 as applied to claim 10 above, and further in view of Thrasher et al. (2003/0086171).

The references as applied above disclose all the limitations of claim 14 except said ultrafine fiber is composed of at least one resin selected from the group consisting of polyacrylonitrile, polyvinylidene fluoride, polyimide, nylon, polystyrene, polyethylene glycol, polyvinyl alcohol, and polyvinyl pyrrolidone.

Thrasher '171 teaches a separator comprising fibers composed of at least one resin selected from the group consisting of polyacrylonitrile, polyvinylidene fluoride, polyimide, nylon, polystyrene, polyethylene glycol, polyvinyl alcohol, and polyvinyl pyrrolidone ([0017]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use at least one material resin material selected from the group consisting of polyacrylonitrile, polyvinylidene fluoride, polyimide, nylon, polystyrene, polyethylene glycol, polyvinyl alcohol, and polyvinyl pyrrolidone to form the ultrafine fibers, since it has been held to be within the general skill of a

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worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (4,697,224) in view of JP563, Takase '876, and JP024.

Watanabe '224 discloses a double layer capacitor comprising a separator (abstract). Watanabe fails to teach the separator according to claim 10.

The combination of claim 10 teaches the separator according to claim 10 (see rejection above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the separator taught by the combination with the electric double layer capacitor of Watanabe '224 to obtain an electric double layer capacitor comprising a separator having a good electrolyte holding capacity.

7. Claims 10 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP563 in view of Machine translation of JP2003-105660 hereafter referred to as JP660 and JP024.

In regards to claim 10,

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JP563 discloses a separator for an electric double layer capacitor, wherein a layer of an ultrafine fibrous aggregate prepared by an electrostatic spinning process is contained, an average fiber diameter of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 1 μm or less (abstract; page 2 – right column - lines 5-16 and left column – line 5; page 14 right column line 12).

JP563 fails to teach the separator for an electric double layer capacitor, the thickness of the entire separator is 25 μm or less, and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm^3 .

JP660 teaches a separator for a capacitor ([claim 8]) wherein the thickness of the entire separator is 25 μm or less (claim 5) and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size (table 1).

JP660 fails to teach the separator for an electric double layer capacitor and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm^3 .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thickness and ratio taught by JP 660 with the separator of JP563 to obtain a separator that is small in size and excellent in ion conductivity.

JP024 discloses a separator comprising an apparent density of 0.1 to less than 0.27 g/cm³ ([0016]). JP024 fails to teach the separator for an electric double layer capacitor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparent density taught by JP024 as the apparent density of the separator of JP563 to obtain a strong separator that has good ion permeability and electrolyte holding.

The limitation “for an electric double layer capacitor” is an intended use of the separator, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987)

In regards to claim 15,

The references as applied above disclose all the limitations of claim 15 except the separator containing a non-ultrafine fibrous aggregate layer having an average fiber diameter of not less than 1 μm, in addition to said ultrafine fibrous aggregate layer.

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JP 660 teaches the separator containing a non-ultrafine fibrous aggregate layer having an average fiber diameter of not less than 1 μm ([0128] & [0024] – thick fiber), in addition to said ultrafine fibrous aggregate layer (super-thin fiber layer).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the non-ultrafine fiber layer taught by JP 660 with the separator of JP563 to obtain a separator that has improved strength.

8. Claims 10-13, 16-17, & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-161563 hereafter referred to as JP563 in view of Takase (2002/0090876) and JP8-339819 hereafter referred to as JP819.

In regards to claim 10,

JP563 discloses a separator for an electric double layer capacitor, wherein a layer of an ultrafine fibrous aggregate prepared by an electrostatic spinning process is contained, an average fiber diameter of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 1 μm or less (abstract; page 2 – right column - lines 5-16 and left column – line 5; page 14 right column line 12).

JP563 fails to teach the separator for an electric double layer capacitor, the thickness of the entire separator is 25 μm or less, and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm^3 .

Takase '876 teaches a separator wherein the thickness of the entire separator is 25 μm or less ([0057]) and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size ([0071]). Takase '876 fails to teach the separator for an electric double layer capacitor and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm^3 .

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thickness and ratio taught by Takase '876 with the separator of JP563 to obtain a separator that is small in size and has a narrow distribution of pore size which allows the electrolyte to be uniformly dispersed thus reducing the internal resistance.

JP819 discloses a separator comprising an apparent density of 0.1 to less than 0.27 g/cm^3 (abstract). JP819 fails to teach the separator for an electric double layer capacitor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparent density taught by JP819 as the apparent density of the separator of JP563 to obtain a strong separator that has good ion permeability and electrolyte holding.

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The limitation “for and electric double layer capacitor” is an intended use of the separator, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Ex parte Masham, 2 USPQ2d 1647 (1987)

In regards to claim 11,

The references as applied above disclose all the limitations of claim 11 except a thickness of the entire separator is 20 μm or less.

Takase '876 teaches a thickness of the entire separator is 20 μm or less ([0057]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thickness taught by Takase '876 with the separator of JP563 to obtain a separator that is small in size allowing miniaturization of the device it is used in.

In regards to claim 12,

The references as applied above disclose all the limitations of claim 12 except the mean flow pore size of said ultrafine fibrous aggregate layer is 1 μm or less.

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Takase '876 teaches mean flow pore size of said ultrafine fibrous aggregate layer is 1 μm or less ([0091] – maximum pore size is 40 μm or less therefore mean flow pore size is 20 μm or less).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the mean flow pore size taught by Takase '876 with the separator of JP563 to obtain a separator that allows uniform dispersion of an electrolyte.

In regards to claim 13,

The references as applied above disclose all the limitations of claim 13 except a ratio (D_d/D_a) of a standard deviation (D_d) of fiber diameters of ultrafine fibers constituting said ultrafine fibrous aggregate layer to an average fiber diameter (D_a) of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 0.25 or less.

Takase '876 teaches a ratio (D_d/D_a) of a standard deviation (D_d) of fiber diameters of ultrafine fibers constituting said ultrafine fibrous aggregate layer to an average fiber diameter (D_a) of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 0.25 or less ([0025]).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the ratio taught by Takase '876 with the separator of JP563 to obtain a separator with uniform pore diameter and internal space allowing the electrolyte to be uniformly distributed.

In regards to claim 16,

The references as applied above disclose all the limitations of claim 16 except a porosity of said separator is 50% to 95%.

Takase '867 teaches a porosity of said separator is 50% to 95% ([0072]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the porosity taught by Takase '876 with the separator of JP563 to obtain a separator with lowered internal resistance and pressure.

In regards to claim 17,

The references as applied above disclose all the limitations of claim 17 except a tensile strength per 1 g/m² in mass per unit area is 0.15 N/5 mm width or more in at least one direction of said separator

Takase '867 teaches a tensile strength per 1 g/m² in mass per unit area is 0.15 N/5 mm width or more in at least one direction of said separator ([0075]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the tensile strength taught by Takase '876 with the separator of JP563 to obtain a separator that is less susceptible to breakage.

In regards to claim 19,

The references as applied above disclose all the limitations of claim 17 except said apparent density is 0.1 to 0.23 g/cm³.

JP819 discloses said apparent density is 0.1 to 0.23 g/cm³ (abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparent density taught by JP819 as the apparent density of the separator of JP563 to obtain a strong separator that has good ion permeability and electrolyte holding.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP563, Takase '876, and JP819 as applied to claim 10 above, and further in view of Thrasher et al. (2003/0086171).

The references as applied above disclose all the limitations of claim 14 except said ultrafine fiber is composed of at least one resin selected from the group

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consisting of polyacrylonitrile, polyvinylidene fluoride, polyimide, nylon, polystyrene, polyethylene glycol, polyvinyl alcohol, and polyvinyl pyrrolidone.

Thrasher '171 teaches a separator comprising fibers composed of at least one resin selected from the group consisting of polyacrylonitrile, polyvinylidene fluoride, polyimide, nylon, polystyrene, polyethylene glycol, polyvinyl alcohol, and polyvinyl pyrrolidone ([0017]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use at least one material resin material selected from the group consisting of polyacrylonitrile, polyvinylidene fluoride, polyimide, nylon, polystyrene, polyethylene glycol, polyvinyl alcohol, and polyvinyl pyrrolidone to form the ultrafine fibers, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

10. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al. (4,697,224) in view of JP563, Takase '876, and JP819.

Watanabe '224 discloses a double layer capacitor comprising a separator (abstract). Watanabe fails to teach the separator according to claim 10.

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The combination of claim 10 teaches the separator according to claim 10 (see rejection above).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the separator taught by the combination with the electric double layer capacitor of Watanabe '224 to obtain an electric double layer capacitor comprising a separator having a good electrolyte holding capacity.

11. Claims 10 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP563 in view of Machine translation of JP2003-105660 hereafter referred to as JP660 and JP819.

In regards to claim 10,

JP563 discloses a separator for an electric double layer capacitor, wherein a layer of an ultrafine fibrous aggregate prepared by an electrostatic spinning process is contained, an average fiber diameter of ultrafine fibers constituting said ultrafine fibrous aggregate layer is 1 μm or less (abstract; page 2 – right column - lines 5-16 and left column – line 5; page 14 right column line 12).

JP563 fails to teach the separator for an electric double layer capacitor, the thickness of the entire separator is 25 μm or less, and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size and an

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apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm³.

JP660 teaches a separator for a capacitor ([claim 8]) wherein the thickness of the entire separator is 25 µm or less (claim 5) and a maximum pore size of said ultrafine aggregate is not more than 3 times a mean flow pore size (table 1).

JP660 fails to teach the separator for an electric double layer capacitor and an apparent density of said ultrafine fibrous aggregate layer is 0.1 to less than 0.27 g/cm³.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the thickness and ratio taught by JP 660 with the separator of JP563 to obtain a separator that is small in size and excellent in ion conductivity.

JP819 discloses a separator comprising an apparent density of 0.1 to less than 0.27 g/cm³ (abstract). JP819 fails to teach the separator for an electric double layer capacitor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the apparent density taught by JP819 as the apparent

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density of the separator of JP563 to obtain a strong separator that has good ion permeability and electrolyte holding.

The limitation “for and electric double layer capacitor” is an intended use of the separator, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Ex parte Masham, 2 USPQ2d 1647 (1987)

In regards to claim 15,

The references as applied above disclose all the limitations of claim 15 except the separator containing a non-ultrafine fibrous aggregate layer having an average fiber diameter of not less than 1 μm , in addition to said ultrafine fibrous aggregate layer.

JP 660 teaches the separator containing a non-ultrafine fibrous aggregate layer having an average fiber diameter of not less than 1 μm ([0128] & [0024] – thick fiber), in addition to said ultrafine fibrous aggregate layer (super-thin fiber layer).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the non-ultrafine fiber layer taught by JP 660 with the separator of JP563 to obtain a separator that has improved strength.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPAT 6,411,497 discloses an apparent density of an EDLC separator being 0.1-1.2 g/cm³ which is therefore easy to handle and has good ion permeability.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID M. SINCLAIR whose telephone number is (571)270-5068. The examiner can normally be reached on Mon - Thurs. 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F. Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Gutierrez/
Supervisory Patent Examiner, Art Unit 2831

/D. M. S./
Examiner, Art Unit 2831